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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: YASHAVANTKUMAR J. ASHER

Serial No.: 09/834,253

Examiner: Leslie A. Wong

Filed: April 12, 2001

Art Unit: 1761

For: CO-EXTRUDED CHEESE SNACKS

RESPONSE

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

This Response is in reply to the Office Action mailed June 18, 2002. A petition and fee for a three-month extension of time is submitted herewith.

Response to 35 U.S.C. § 112, First Paragraph, Rejection

In the June 18, 2002 Office Action, the Examiner rejected claims 1-13 under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specific basis for the Examiner's § 112, first paragraph, rejection is the Applicant's alleged failure to clearly teach what is encompassed by "substantially flow out" or "stored at room temperature." The Examiner, however, does not specify whether such rejection is based upon an alleged inadequate written description or lack of enablement.

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Applicant respectfully requests reconsideration of the rejection of claims 1-13. Applicant has satisfied both requirements because the specification provides support for both phrases, and the meaning of both phrases is commonly known and known to those skilled in the art.

"Substantially Flow Out"

In his discussion of the prior art in the specification, the Applicant distinguishes his invention from U.S. Patent No. 5,194,283 (*Dupas*) on the basis that the product disclosed in *Dupas* included a non-cheese core only when dispensed in a cup to prevent the core from leaking out (Application at 2, lines 1-4). The Applicant further describes a principal deficiency in the prior art: "If the flavoring core is sufficiently fluid, it may actually *flow or leak* out of the snack at the exposed end faces." (*Id.* at 2, lines 8-9)(emphasis added). Applicant further describes his invention as overcoming the problem of, among other things, "a relatively-fluid central core leaking out of the exposed end faces of a cheese snack." (*Id.* at 2, lines 13-14). Each of these statements defines and provides support for the claim language "flow out."

Further support for the phrase "substantially flow out" is found in the ordinary definition of the term "substantial." *The American Heritage Dictionary of the English Language* (4th ed.) defines "substantial" as "considerable in . . . amount." "Not substantial," as in Claim 1 of the Application, is therefore defined as *not* considerable in amount. Alternatively, the same dictionary defines "insubstantial" as "negligible in size or amount."¹

Furthermore, the Federal Circuit recently confirmed in *Verve, LLC v. Crane Cams, Inc.*, Case No. 01-1417 (Fed. Cir November 14, 2002), that the term substantially may be used to distinguish the claimed subject matter from the prior art:

¹In *Texas Digital Systems Inc. v. Telegenix Inc.*, Case No. 02-1032 (Fed. Cir. October 16, 2002), the Court of Appeals for the Federal Circuit recently held that objective resources such as dictionaries, encyclopedias and treatises are not extrinsic evidence, and may be the "most meaningful" starting point for claim construction – more meaningful than even the written description.

It is well established that when the term "substantially" serves reasonably to describe the subject matter so that its scope would be understood by persons in the field of the invention, and to distinguish the claimed subject matter from the prior art, it is not indefinite. Understanding of this scope may be derived from extrinsic evidence without rendering the claim invalid.

In *LNP Engineering Plastics, Inc. v. Miller Waste Mills, Inc.*, 275 F.3d 1347, 1354 (Fed. Cir. 2001), the Federal Circuit affirmed the District Court's construction of the term "substantially completely wetted" to mean "largely, but not necessarily wholly, surrounded by resin . . .," citing the *Webster's Ninth New Collegiate Dictionary* (9th ed. 1983) definition of "substantially" as meaning "largely but not wholly that which is specified," and *Ecolab, Inc. v. Envirochem, Inc.*, 264 F.3d 1358, 1369 (Fed. Cir. 2001). Notably, the *LNP Engineering Plastics* Court upheld the validity of the patent although "substantially completely wetted" was "neither recited nor specifically defined anywhere in the written description." 275 F.3d at 1355.

More generally, it is not necessary that the subject matter of a later claim be described literally in the specification. *In re Lukach*, 169 USPQ 795, 796 (CCPA 1971). It is sufficient that the specification conveys to those skilled in the art that the applicant invented the specific subject matter later claimed. *In re Wertheim*, 191 USPQ 90, 97 (CCPA 1976).

Based on the specification and the dictionary definition of substantial, the phrase "substantially flow out" in Applicant's claims is used to describe a cheese snack in which leakage or flow out of the core is negligible, or not considerable, in amount.

"Stored at Room Temperature"

In the Applicant's discussion of the deficiencies in the prior art, the Applicant states that the problem of flow or leakage of the flavoring core "is exacerbated if the composite product is not chilled, but is adapted to be stored at room temperature prior to use or consumption." (Application, p. 2, lines 9-11). A sample definition of "room temperature," which is consistent with this discussion in the

specification, is found in the *Wordsmyth Dictionary-Thesaurus* (www.wordsmyth.net): "a comfortable indoor temperature or the temperature prevailing indoors without excessive heating or chilling."

In addition, according to the U.S. Patent and Trademark Office website, claims in at least eighteen patents issued between 1996 and 2002 use the phrase "stored at room temperature" or its equivalent, and 5,801 issued patents use the phrase "room temperature." For example, in U.S. Patent No. 6,472,005 (*Lingk*), entitled SAVORY SNACK PRODUCT, independent claims for food snacks conclude with the phrase "wherein the product can be stored at room temperature . . ." without any further definition in the specification. As in the instant case, *Lingk* describes deficiencies in the prior art which are satisfied by the ability of the patented product to be stored at room temperature, without refrigeration. This, and the several other patents which include the same phrase, demonstrate that "stored at room temperature" is known and understood by persons skilled in the art, and does not require further definition.

Applicant's specification expressly addresses the salient issue: that the cheese snack does not require "chilling" prior to use or consumption to accomplish one of its principal improvements over the prior art, and that the cheese snack does not leak, *i.e.*, the core does not substantially flow out, at room temperature. (Application at 2).

Because the specification teaches what is encompassed by "substantially flow out" and "stored at room temperature," and because the ordinary meaning of such phrases is commonly known and known to those skilled in the art, the Applicant respectfully requests reconsideration of claims 1-13, and courteously solicits their allowance.

Response to 35 U.S.C. § 103(a) Obviousness Rejection

In the June 18, 2002 Office Action, the Examiner rejected claims 1-13 under 35 U.S.C. § 103(a) as having been allegedly obvious over *Dupas* in view of U.S. Patent Nos. 5,709,900 (*Miller*), 5,807,601 (*Carpenter*), and 6,113,953 (*McMahon*).

Applicant respectfully requests reconsideration of the rejection of the claims 1-13 for alleged obviousness.

The Examiner's obviousness rejection is based upon two arguments: (1) that the use of stabilizers in cheese products is well-known and within the skill of the art, and (2) that the Applicant's claimed invention does not produce unexpected results. None of the prior art references, however, discloses or suggests the use of stabilizers in a *non-cheese* core normally flowable at room temperature; none discloses or suggests the inventive process described at pages 5-7 of the Application; and none discloses a non-cheese product which does not leak or flow at room temperature. The secondary references teach the use of starch, maltodextrin, hydrocolloid stabilizers and gums in cheese for purposes different from those for which the Applicant uses such compositions. In addition, the unexpected results of Applicant's invention are clearly highlighted throughout the Application, as discussed below.

To establish obviousness, (1) the prior art itself must suggest or motivate the modification of a reference or the combination of reference teachings, (2) the prior art must teach or suggest a reasonable expectation of success, and (3) the prior art must teach or suggest all of the claim limitations. M.P.E.P. § 2143. The "teachings of references can be combined only if there is some suggestion or incentive to do so." *ACS Hospital Sys., Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577 (Fed. Cir. 1984).

Dupas, the primary reference, discloses a co-extruded cheese snack with a cheese or non-cheese core. When a non-cheese core (e.g. strawberry pulp [Col. 5, lines 36-40, Figs. 5, 6]; or tomato and tomato concentrate [Col. 5, lines 41-45, Fig. 7]) is used, however, a "container" or "cup" is required to contain the core "overrun" or leakage [Col. 5, lines 36-45, Figs. 5, 6, 7]. The fact that no cup, container or other device is required to prevent core leakage is disclosed as one of the principal advantages and unexpected results of the Applicant's invention.

Claim 11 of the *Dupas* patent confirms the need, in that invention, for a container or "vacuum wrapping" in the patented process when a non-cheese core is co-extruded within a cheese outer layer. Claim 1 (and dependent claims 2-10) define a co-extruded product consisting of a *cheese core* with a different cheese layer about the core. No cup, container or vacuum wrap are specified in those claims.

Significantly, co-extrusion in *Dupas* is performed in a cold compression process at a temperatures of 0° to 30° C, and its claims are so limited. Applicant's invention, by contrast, provides no such limitation, as core extrusion may be performed "using a conventional cooker-stretcher where cheese enters the extrusion device at temperatures on the order of 54-60° C, but sometimes as high as 75°." (Application at 2, lines 23-25). "In the inventive process, . . . the curd is heated and kneaded with the aid of warm water and twin screws." (Application, p. 5, line 32 through p. 6, line 1). *Dupas*, on the other hand, teaches cooling. In summary, "conventional" equipment, in a normal cheese operation, at normal operating temperatures, is used to produce the Applicant's cheese snack. Cold compression machinery operating at 0° to 30° C is not required.

Dupas does not teach or suggest any means by which a cup, container or vacuum wrap may be eliminated, nor does *Dupas* provide any motivation for adding stabilizers to non-cheese cores. The claims in *Dupas* provide for stabilizers (monoglyceride or diglyceride) in curds only (Col. 7, 8, Claims 8 and 17), *not* in non-cheese cores. Applicant's claims expressly limit the use of stabilizers to the core of the cheese snack.

As noted in the Applicant's specification, the cheese outer layer in Applicant's invention is made from a natural cheese selected from the group of mozzarella, cheddar, and Monterey Jack, and others (Application at 3, lines 14-18). The specification later confirms that such cheeses are "natural cheeses." (Application at 7, lines 13-14). Because the cheese snack of the Applicant's invention is a "natural cheese," the stabilizers defined in Claims 5, 6, 7, 11, 12 and 13 cannot be added to the cheese

outer layer. If they were, federal regulations would require that the cheese snack be labeled as a "processed" cheese.

The secondary references, *Miller*, *Carpenter* and *McMahon*, are cited solely because they disclose the "use of stabilizers in cheese products." None, however, suggests or teaches the use of stabilizers in a more-fluid flavoring core, *e.g.*, a non-cheese core like pizza sauce or salsa. Furthermore, none teach the use of stabilizers to prevent flow or leakage. Moreover, none teaches or suggests the cheese snack and process described in detail at pages 5-7 of the Application.

McMahon discloses a process which results in pizza cheese having excellent melt properties without the need for aging. Unlike the Applicant's invention, the reason for the use of stabilizers in *McMahon* is "to aid in improving the melting properties" and "to control the moisture content of the cheese, which also plays a role in the properties of the cheese upon baking on a pizza." (Col. 6, lines 46-57).

Carpenter discloses an imitation or processed cheese product (not a natural cheese) which includes starch and hydrocolloids. Importantly, *Carpenter* teaches away from use of starches as stabilizers because they are too expensive. (Col. 3, lines 39-50). In addition, hydrocolloids are used in *Carpenter* not to add stability, but to improve body, texture and eating qualities – to attempt to make imitation cheese feel and taste like natural cheese.. (Col. 4, lines 25-31).

Miller discloses a low fat cheese. As in *Carpenter*, starch and maltodextrin are used in *Miller* as "mimetics." (See, *e.g.*, Claims 1 and 3). In other words, they are used to attempt to produce a cheese product which mimics natural cheese. The Applicant's invention, on the other hand, comprises natural cheese. Starch or maltodextrin may be used to prevent leakage of the core, but this is not taught or suggested by *Miller* or the other references.

Neither *Miller*, *Carpenter* nor *McMahon* teach or suggest co-extrusion. Furthermore, none suggest that stabilizers be added to prevent leakage at room temperature.

The novelty of Applicant's invention is not limited to the addition of stabilizers to co-extruded cheese snacks. The inventive product and process described in the specification provides a co-extruded cheese snack which has a core – normally flowable at room temperature – which does not flow or leak after the inventive process is used. There is simply no suggestion or teaching in the prior art for the improved process and characteristics claimed by Applicant.

The Office Action cites *In re Levin*, 84 USPQ 232, 234 (CCPA 1949), as support for the position that, in connection with "new recipes or formulas for cooking food," an applicant must show a "coaction or cooperative relationship between the selected ingredients which produces a new, unexpected and useful function."

The Applicant's invention is not limited, however, to the addition of new ingredients to cheese products. Moreover, the new, unexpected and useful function produced by Applicant's invention is very clearly set forth in the specification:

This invention overcomes the problem of a relatively-fluid central core leaking out of the exposed end faces of a cheese snack. The technologies heretofore developed are believed to have failed to permit the use of softer more-fluid core materials, without leakage of the core material from the exposed end face(s) upon traverse cutting or slicing of the composite food product. In the prior art, the probability of core material leakage required that the core be completely encapsulated within an outer layer, or required extrusion of the product in to cup. The present invention permits co-extrusion and transverse cutting or severance of co-extruded masses having softer and more-liquid cores, without leakage of the core material from the exposed end face(s) of the cheese snack during further processing steps, including packaging. (Application, at 2, lines 13-22).

Based on the foregoing, the Applicant respectfully submits that the Examiner has not demonstrated a *prima facie* case of obviousness. The lack of obviousness is supported by a number of Federal Circuit decisions. The Federal Circuit in *In re Rijckaert*, 28 USPQ2d 1955 (Fed. Cir. 1993), held that the PTO fails to establish a *prima facie* case of obviousness under 35 U.S.C. §103 when "the prior art

relied upon does not disclose, suggest, or render obvious the claimed invention, either individually or when combined." 28 USPQ2d at 1957. In responding to the Commissioner's argument that in the recording art the exact match of signal time to recording time was an optimal condition and that this condition would have been met by fulfilling the claimed relationship, the Federal Circuit stated:

While the condition described may be an optimal one, it is not "inherent" in Awamoto. Nor are the means to achieve this optimal condition disclosed by Awamoto, explicitly or implicitly. The mere fact that a certain thing may result from a given set of circumstances is not sufficient to establish inherency. That which may be inherent is not necessarily known. Obviousness cannot be predicated on what is unknown. Such a retrospective view of inherency is not a substitute for some teaching or suggestion supporting an obviousness rejection. *Id.*

Thus, because the references did not discuss all of the characteristics found in the claims, let alone the manner of optimizing them, a *prima facie* case of obviousness had not been established.

The law is clear that it is improper to base an obviousness type rejection on the premise that it would have been obvious to vary all parameters or try each of numerous possible choices until one arrived at a successful result, where the prior art gave either no indication of which parameters were critical or no direction as to which of many possible choices is likely to be successful. A rejection on such grounds is improper. *See, In re Geiger*, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987). Similarly, it is improper to base an obviousness type rejection on the premise that it would have been obvious to explore a general approach that seemed to be a promising field of experimentation, where the prior art gave no general guidance as to the particular form of the claimed invention or how to achieve it. *See, In re Dow Chemical Co.*, 5 USPQ2d 1529, 1532 (Fed. Cir. 1985).

In the present case, there is no teaching or suggestion in the prior art for the combination of characteristics claimed, nor does the prior art discuss any means of optimizing the claimed characteristics. The cited prior art does not disclose all the claimed characteristics of the co-extruded cheese snack, nor does it disclose or identify these characteristics as being of the type that are desired, nor does it

disclose the type of experimentation needed to accomplish Applicant's invention. Accordingly, it is respectfully submitted that Applicant's claimed invention would not have been obvious to one skilled in the art.

This is believed to be fully responsive to the Office Action mailed June 18, 2002, and is believed to squarely address each and every ground for rejection or objection raised by the Examiner, and is further believed to materially advance this application towards immediate allowance.

Formal allowance of claims 1-13 is, therefore, courteously solicited.

Respectfully submitted,

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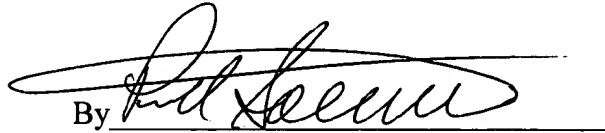
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Dated: December 17, 2002

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Signed: December 17, 2002

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